



BEIS YAAKOV JEWISH HIGH SCHOOL ACADEMY

Science Programme of Study 2024-25

The Science curriculum is designed to increase our pupils' knowledge, skills and understanding of the physical world around them, and to help them appreciate the relevance of Science in their everyday lives. Our curriculum has been built on the principles of interleaved learning: pupils will revisit and augment previous knowledge on a short, medium and long-term basis. We will also provide students with the skills they need to succeed in life; critical thinking, logical deduction, language skills, mathematical skills and the ability to analyse and interpret data.

The curriculum will also prepare students to achieve their full potential in GCSE Science through outstanding teaching, effective discipline in line with whole-school policy, accurate monitoring and meaningful intervention. The Science curriculum will embrace other subjects' curriculums in order to fit in with the whole school vision of providing a coherent and accessible education for students of all abilities and interests.

The Science curriculum is designed to develop personal qualities and cultural capital in all students in a wider context by giving them an understanding of (amongst other things): health issues (e.g. obesity, smoking, cancer treatments); moral issues (e.g. genetic modification); and environmental issues (e.g. nuclear and fossil fuels, global warming) whilst being sensitive of their cultural needs.

SCIENCE CURRICULUM AREA STAFF 24 - 25

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CURRICULUM MAP

SUBJECT	YEAR GROUP	AUTUMN 1	AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
Science	Y7	Introduction to Science, Electromagnets Part 1 Organisms Part 1	Matter Part 1	Forces Part 1	Genes Part 1, Reactions Part 1 Energy Part 1	Ecosystems Part 1	CREST Science Project
	Y8	Earth Part 1, Organisms Part 2 Matter Part 2	Waves Part 1	Genes Part 2	Electromagnets Part 2 Forces Part 2 Reactions Part 2	Ecosystems Part 2	CREST Science Project
NB: Catch up curriculum year due to resequencing to ensure full NC coverage	Y9	Genes Part 1 (L1-L3) Reactions Part 1 Energy Part 1 Genes Part 2	Reactions Part 2	Earth Part 1 Waves Part 1 (Light)	Energy Part 2 Earth Part 2 Waves Part 2	B1 Transition Units	C1 Transition Unit
Combined Science (Trilogy)	Y10	B1 Cell structure and transport C1 Atomic structure P1 Conservation and dissipation of energy	B2 Cell division C2 Periodic table P2 Energy transfer by heating B3 Organisation and the digestive system	C3 Bonding and structure P3 Energy resources	B4 Organising animals and plants C5 Chemical changes P4 Electric circuits B5 Communicable disease	C7 Energy changes P5 Electricity in the home B6 Preventing and treating disease C4 Chemical calculations	P6 Molecules and matter B7 non-communicable disease C6 Electrolysis P7 Radioactivity
Separate Science Biology	Y10	B1 Cell structure and transport B2 Cell division B3 Organisation and the digestive system	B4 Organising animals and plants	B5 Communicable disease	B6 Preventing and treating disease B7 non-communicable disease	B8 Photosynthesis B9 Respiration	B16 Adaptations, interdependence and competition B17 Organising an ecosystem

Separate Science Chemistry	Y10	C1 Atomic structure	C2 Periodic table C3 Bonding and structure	C5 Chemical changes	C7 Energy changes C4 Chemical Calculations	C6 Electrolysis C9 Crude Oil and Fuels	C10 Organic Reactions
Separate Science Physics	Y10	P1 Conservation and dissipation of energy P2 Energy transfer by heating	P3 Energy resources	P4 Electric circuits P5 Electricity in the home	P6 Molecules and matter P7 Radioactivity	P8 Forces in Balance	P9 Motion
Science Entry Level Certificate	Y10	Component 1 Biology: The Human Body	Component 3 Chemistry: Elements, Mixtures and Compounds	Component 5 Physics: Energy, Forces and the structure of Matter	Component 2 Biology: Environment, Evolution and Inheritance	Component 4 Chemistry: Chemistry in Our World	Component 6 Physics: Electricity, Magnetism and Waves
Combined Science (Trilogy) Biology	Y11	B7 Non-communicable disease B8 Photosynthesis B9 Respiration	B10 The Human Nervous System	B11 Hormonal Coordination B12 Reproduction B13 Variation and Evolution B14 Genetics and Evolution	B15 Adaptations, Interdependence and Competition B16 Organising an Ecosystem B17 Biodiversity and Ecosystems	Biology Revision – all units	
Combined Science (Trilogy) Chemistry	Y11	C7 Energy Changes C8 Rates and Equilibrium	C9 Crude Oil and Fuels	C10 Chemical Analysis C11 The Earth's Atmosphere	C12 The Earth's Resources	Chemistry Revision – all units	
Combined Science (Trilogy) Physics	Y11	P5 Electricity in the Home P6 Molecules and Matter P7 Radioactivity	P8 Forces in Balance	P9 Motion P10 Force and Motion P11 Wave Properties	P12 Electromagnetic Waves P13 Electromagnetism	Physics Revision – all units	
Separate Science Biology	Y11	B10 The Human Nervous System	B13 Reproduction	B14 Variation and Evolution	P13 Electromagnetic Waves P14 Light	Biology Revision – all units	

*to support Physics content		B11 Hormonal Coordination B12 Homeostasis in Action		B15 Genetics and Evolution B18 Biodiversity and Ecosystems			
Separate Science Chemistry	Y11	C7 Energy Changes C8 Rates and Equilibrium	C9 Crude Oil and Fuels	C10 Organic Reactions C11 Polymers C12 Chemical Analysis	C13 The Earth's Atmosphere C14 The Earth's Resources C15 Using Our Resources	Chemistry Revision – all units	
Separate Science Physics	Y11	P5 Electricity in the Home P6 Molecules and Matter P7 Radioactivity	P8 Forces in Balance	P9 Motion P10 Force and Motion P11 Force and Pressure	P12 Wave Properties P15 Electromagnetism P16 Space	Physics Revision – all units	